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ABSTRACT

A study defined more clearly the role of apprehension, motivation, and gender in student questioning. A survey of 118 questions was given to 156 students enrolled in an introductory communication course. The questions were designed to study student perception of the nature of questioning and to examine student-related and instructor-related factors that may influence student questioning. Students were given hypothetical situations in order to examine their questioning behavior. Results included that: (1) instructor or student gender failed to influence communication apprehension level or questioning motivation; (2) students with high classroom communication apprehension failed to respond as positively to the instructor's behavioral interventions as the highly motivated question-askers; and (3) motivation level is a better indicator of question-asking than classroom apprehension level. (Three tables of data are included; 26 references and the question motivation scale are attached.) (Author/SR)

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The Relationship of Classroom Communication Apprehension and Motivation to College Student Question-asking

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The Relationship of Classroom Communication Apprehension and Motivation to College Student Question-asking

Abstract

The purpose of this study was to define more clearly the role of apprehension, motivation, and gender in student questioning. A survey of 118 questions was given to 156 students enrolled in an introductory communication course. The questions were designed to study student perception of the nature of questioning and to examine student-related and instructor-related factors that may influence student questioning. To go beyond simple student perception of their intentions to ask questions, students were given hypothetical situations to examine their questioning behavior.

The Relationship of Classroom Communication Apprehension and Motivation to College Student Question-asking

Most teachers pause periodically to ask students if they have questions. Often, the students sit in silence, so the teacher continues. This lack of student questioning has become particularly pervasive in the college classroom. Although the phenomenon of questioning is one of the most studied topics in education (Gliessman, 1985), research has concentrated on teacher questioning in the pre-college classroom (Foss, 1989; Karp & Yoels, 1976; Pearson & West, 1991). Thus, the nature of student questioning in the college classroom has received relatively little attention.

Although effective communication skills in instruction has long been a topic of research in speech communication relating teacher and student characteristics, for example, and proposing more effective teaching strategies (e.g. Staton-Spicer & Wulff, 1984), relatively few studies in our field emphasize the nature of questioning (Darling, 1989; Pearson & West, 1991). These studies have indicated problems--too few students asking too few questions--as they have defined what is happening regarding college student questioning. More research needs to be done, however, to determine what should be done to improve the nature of college student question-asking in the classroom. The study on questioning by Pearson and West (1991) demonstrated that university undergraduates ask few questions in their college courses; a fact most classroom teachers already know. They also observed that instructor gender accounted for some differences in student questioning behaviors. For the classroom teacher, however, their study provided little insight into how to improve student questioning. In one study to determine what instructor behaviors may increase student questioning, Aitken and Neer (1991) found methods of instructor encouragement to be the best way to prompt students to ask questions in the classroom. Findings in their study revealed that the

perceived value of class discussion and satisfaction with the student's current level of question-asking also predicted student intentions to ask questions in class.

The present study was designed to learn more about student perception of the nature of questioning and to examine student-related and instructor-related factors that may influence student questioning. Two general questions have guided this research: "What is the nature of college student questioning?" and "What can be done to improve college student questioning?" Although teacher questions are important and well-researched, we believe an emphasis on understanding the nature of student questioning may be more important than student answers to teacher questions. As early as 1963, Carner suggested that "the evidence that good teaching has taken place is reflected more in the kinds of questions pupils ask than in the abundance of pat answers they can produce" (p. 550). Thus, the Pearson and West finding--which confirmed earlier research (e.g. Karp & Yoels, 1976)--that an entire class asks only about three questions per hour suggests a need to change student and teacher behaviors.

Profile of the Question-Asker

Given the fact that empirical results indicate only a few students ask those few questions, teachers may want to know what kinds of students ask questions. From earlier research, one can assume the students are most often high achievers (Good, Slavings, Harel, & Emerson, 1987), males (Karp & Yoels, 1976), and effective communicators (Darling, 1989). But every teacher has seen exceptions to this profile of the student questioner. So, what can be done to improve the quantity and quality of student questioning from a variety of students? Karp and Yoels (1976) found that only those few students who do the assignments and choose to be actively involved in the learning process interact orally with the teacher. They suggested that most students fail to prepare for class and therefore are unable to ask appropriate questions. Other students do not want the teacher's position to appear

threatened by student questioning, nor do they want to be criticized themselves by drawing attention to their interaction with the teacher.

One might therefore expect communication apprehension to be closely correlated to a student's question-asking behaviors. Research in classroom communication apprehension (CCA) has demonstrated that fear is, indeed, one of the primary concerns that some students report they experience in the classroom (Neer, 1987; Neer & Kircher, 1989). Dillon (1981) established student fear as the primary reason why students fail to ask questions. Karp and Yoels further suggested two issues important to apprehension. First, teachers perceive students as anxious in the classroom and therefore limit student talk because they do not want to exacerbate the problem. Second, when teachers use behaviors to encourage students to think critically, students may perceive their behaviors as "put downs." In addition to apprehension level and gender, we wanted to identify global variables that may better explain what kinds of college students do and do not ask questions in class. Apprehension does not qualify as a global variable because only 20 percent of all college students are apprehensive (McCroskey, 1984). Although gender does qualify, two previous studies reported that gender only marginally affected question-asking behavior (Aitken & Neer, 1991; Pearson & West, 1990) Thus, one can assume that neither apprehension nor gender contributes to an understanding of the question-asking behavior of the majority of students.

In our initial study (Aitken & Neer, 1991), however, factors other than apprehension seemed to influence question-asking. Students were required to write short essays describing courses in which they asked questions and courses in which they failed to ask questions. Their responses indicated that a general motivation factor also influenced their desire to ask or not to ask questions, including whether they were prepared for class, and whether they were interested in the course or the lecture topic.

Because our field lacks a coherent conceptualization of motivation in measures (Zorn, 1991), and because the results of the initial study suggested that students wanted but failed to ask questions, the first purpose of the study was to examine the role of motivation in student question-asking. We developed the Question Motivation Scale (QMS) to measure motivation as a factor that may explain questioning behavior in the classroom. The QMS was designed to evaluate whether classroom apprehension or questioning motivation could better predict student intentions to ask questions in the classroom.

How Can Teachers Prompt Student-questioning?

Another purpose of this study was to learn more about the association of teacher behaviors with student questioning. The items used to define instructor interventions in our initial study (Aitken & Neer, 1991) initially were generated from current research in teacher communication competence (or lack of competence). Accumulated research addressing positive and negative elements of teacher competence has demonstrated that several interventions constitute elements found to affect classroom learning (Andersen, Norton, & Nussbaum, 1981; Rubin & Feezel, 1986; Spitzberg & Hurt, 1987). In the initial study, 22 items operationalized the instructor intervention variables including instructor discussion style, instructor interaction style, and instructor discouragement behavior. The present study reexamined the interventions by comparing their relationship to both apprehension and motivation.

Not only were we trying to determine what behaviors reduce question-asking, but what contextual factors increase student questioning. Situational factors included conspicuousness, evaluation apprehension, novelty, and acquaintance level, which have been identified by Buss (1980) and McCroskey (1984) as factors contributing to state anxiety level of high apprehensives. While these factors now have been demonstrated to function in a dispositional manner (e.g., Ayers, 1991; Beatty, Balfantz, & Kuwabara, 1989; Beatty & Friedland, 1990), we find no evidence that only high

apprehensives experience immediate anxiety triggered by these factors. Instructors--who are in a position to structure the classroom environment to reduce state anxiety reactions--may perform an important role in moderating the effects of situational factors. Thus, we wanted to determine which situational factors instructors were best able to influence. The factors examined were: (a) conspicuousness, (b) subordinate status, (c) ambiguity reduction, and (d) acquaintance level.

Conspicuousness. Conspicuousness is defined as standing out in one's environment or occupying the center of attention. In accordance with this concept, some students may prefer not to ask questions so that they can avoid becoming the center of attention in class. Conspicuousness may be related to class size: as class size increases, students may feel more conspicuous asking questions.

Subordinate status. Subordinate status is defined as perception of status differential caused by authority or power-based role differences (i.e., teacher to student) or by informational deficiency (i.e., not knowing as much about the topic as others).

Ambiguity Reduction. Ambiguity reduction refers to the degree of uncertainty or predictability regarding the task at hand. Thus, as certainty or understanding of the course increases, question-asking may be initiated with increased probability of success (i.e., having information sufficient to asking a valid question).

Acquaintance Level. Acquaintance level refers to how well students know one another. The better students know each other and the nature of the questioning process in a particular course, the more willing they may be to ask questions. This idea may be particularly true if students perceive that they are able to ask questions of interest to the class. Thus, acquaintance level may require an initial period of adjustment, perhaps as long as several weeks into the semester.

In addition, the study attempted to support earlier research regarding the role of instructor gender and instructor behavioral interventions on the question-asking intentions of male and female students.

Research Questions

RQ1. Does student or instructor gender affect classroom questioning?

RQ2. What is the relationship between classroom communication apprehension and question motivation and student behavioral intentions to ask questions?

RQ3. What is the relationship between contextual (i.e., situational or predispositional) factors and classroom communication apprehension and questioning intentions?

RQ4. Does a student's classroom communication and question motivation affect frequency of question-asking?

RQ5. Will some instructor behavioral interventions prove more successful based on a student's apprehension level or motivation?

Method

Respondents. Respondents were 156 (female = 61%, age median = 19.6 years) university undergraduate volunteers enrolled in a basic communication course at a midsize, midwestern, urban university during the Winter, 1992 academic semester. Respondents received extra-credit for completing a 118 question survey assessing their classroom apprehension and questioning behavior.

The survey required approximately 30 minutes of class time to complete. Because students can enroll in different size classes, respondents were instructed to describe their questioning behavior in an average-sized class of 25-30 students. This size provided a common frame of reference for those responding to the survey.

Apprehension Measure. CCA was measured with the Classroom Apprehension Participation Scale (CAPS). The CAPS consists of 25 items measured similarly to the PRCA. The reliability of the CAPS has consistently ranged from .92 to .94

in published reports (Neer, 1987; Neer, 1990). The Cronbach reliability estimate in this study was .93. Descriptive statistics and factor analysis of the CAPS was similar to findings reported in published data.

Question Motivation Scale (QMS). Our initial study identified several factors other than apprehension may explain question-asking in the classroom. Pilot study responses were used to develop a 12-item inventory to measure motivation to ask questions in class (Aitken & Neer, 1991). The measure--the Question Motivation Scale (QMS)--was scaled through 5-point Likert-like categories. The Cronbach reliability estimate was .79. All twelve items loaded on the unrotated factor with half the items loading above .50. Two items loaded above .60 and none loaded below .46 (Eigenvalue = 4.33, %Variance = 34). The items represent general satisfaction level with question-asking along with additional factors motivating including: interest in the class, interest in the subject matter, physical well-being, and general mood before going to class (see Appendix A).

Contextual Measures. Six situational/predispositional factors were examined with each factor operationalized through two stimulus items measured similarly to the QMS and CAPS.

The items are similar to those used by Beatty and Friedland (1990). Respondents were instructed to rate each item as a factor that influenced their decisions regarding voluntary question-asking. The items were: "Other students seem to know more about the topic than me" and "I do not feel well-informed on a topic to participate" (subordinate status -- SS -- alpha = .64), "I do not know my classmates well enough to open up in class" and "most of the students in class are strangers" (Acquaintance level -- ACQ -- alpha = .67), "I feel uncomfortable talking with my teachers" and "I do not like being the center of attention with others looking at me" (Conspicuousness -- CON -- alpha = .54), "I am uncertain how the instructor will react to or evaluate what I say" and "I am uncertain how the class will react to or evaluate what I say" (Evaluation potential -- EP -- alpha = ..68), "I am not used to

talking in classes in which the instructor expects class discussion" and "asking questions and participating in discussion is a new experience for me" (Novelty -- N -- alpha = .59), and "I seem to have little in common with most other students in class" and "most of the students seem very different from me" (Dissimilarity -- DIS -- alpha = .76).

Measure of Instructor Intervention Behaviors. Four intervention sets were examined: (1) instructor discussion ability, (2) instructor interaction style, (3) instructor method of responding to student questions, and (4) classroom discussion structure.

Each dimension is well-grounded in CA research (Neer, 1987; Neer, 1990) or research in teacher communication competence (Anderson, Norton, & Nussbaum, 1981; Potter & Emanuel, 1990). That is, each set has been found to either influence student ratings of teacher competence or has affected state anxiety levels of apprehensives. All sets were operationalized with four items measured through 5-point Likert-like scales.

The first set, instructor interaction style (alpha = .59) included the following items: the instructor demonstrates a sense of humor, is open to viewpoints other than his or her own, is a serious individual who conducts the class in a formal manner, and is able to disclose his or her experiences which are relevant to the discussion topic.

The second set, instructor ability (alpha = .63) included these items: the instructor teaches in a clear fashion, is able to visualize the discussion topic by telling a story or providing an example to help clarify the issue, demonstrates a clear understanding of the material, and is able to keep the discussion focused and summarizes what students are saying. Although one might expect a teacher who is a poor communicator to prompt more questions of clarification, the initial study suggested students prefer not to talk to instructors who communicate poorly.

The third intervention set examined an instructor's method of responding to students (alpha = .56). These items included: the instructor challenges students or plays "devil's advocate," the instructor indicates verbally and nonverbally that he or she is listening and responds directly to questions, the instructor thanks students for asking questions, and the instructor makes students answer their own questions.

The final intervention set examined the classroom structure (alpha = .63) in which question-asking was manifested. The four items used to operationalize the set were: the instructor has the class meet in small groups to discuss, has the class turn in questions ahead of time that they would like to have answered, students receive a list of questions ahead of time so they can think of responses prior to the discussion, and the class sits in a circle to discuss.

Questioning Behavior Measures. Two behavioral intentions sets were defined to examine the research questions tested in this study. The measure consisted of seven items (alpha = .64) measured on a 7-point behavioral intention scale. The first measure described a class situation in which it was midsemester and students were well-acquainted with one another as well as with the instructor who now addressed students on a first-name basis. This description was followed by informing the respondents that the instructor had previously asked the class to prepare discussion questions over the assigned reading. Instructor gender was manipulated by informing half the respondents that the instructor was a male, with the other half informed that the class was taught by a female instructor.

The variables used in constructing the situation (i.e., midsemester versus early in the semester, prepare questions versus respond to instructor's questions) were not manipulated because recent research in CCA has reported that these variables reduce state anxiety while their counterparts increase anxiety reactions. Respondents then were instructed to rate the likelihood they would use each of the following types of responses: "If I was called on I would make my

responses as short and brief as possible," "I would probably not ask my prepared question until after some additional probing from the instructor," "I would try to relate my question to something another student had said," "I would write down one or more questions that I would ask if I was called on," "I would try to summarize something I had read in the text," "I would not ask my question until called on," and "I would ask the instructor to provide an example so that I would have a better idea of how to phrase my question."

The second behavioral intention measure included a nine response prompt set (alpha = .84) in which the instructor, midway through the lecture, stopped and prompted the class to raise any questions they would like to ask before continuing with the lecture. Instructor gender was manipulated similarly to the first measure. The behavioral intention items examined respondent's perceptions regarding the instructor's eagerness and sincerity in extending the invitation to students to ask questions, the instructor's behavior while extending the invitation, and respondents intrapersonal responses to the invitation.

Perception of the instructor's eagerness and sincerity included the following items: "I would wonder whether the instructor really wants questions or is just extending a courtesy to students not expecting them to actually ask questions," "I would ask a question if the instructor not only seemed interested but also demonstrated concern by asking follow-up questions to determine if the class understood the lecture," and "I would ask a question if the instructor really seemed eager for students to ask questions." The instructor's behavior while asking for questions included two items: "I would ask a question if the instructor paused and gave the class enough time to think of questions" and "I would ask a question if the instructor either moved away from the lectern or sat down to let the class think of questions." The remaining four items examined students' reactions to the instructor's invitation to ask questions: "I would become

anxious and hope the instructor does not look to me for a question," "I would probably ask a question only if I could not understand course material on my own," "I would ask a question if I thought the instructor could provide a stimulating and interesting answer," and "I would ask a question if I thought it would help my grade on an upcoming test or assignment."

A third measure also was included to determine whether male and female respondents had differing preferences with the type of questions they would ask a male or a female instructor. The eight item question preference set consisted of four response categories: (1) more likely to ask a male instructor, (2) more likely to ask a female instructor, (3) likely to ask either, and (4) not likely to ask either.

Question preferences were of four types: questions of challenge ("politely challenge the instructor to defend something he or she said and ask a question that challenges or disagrees with something stated in the text"), questions of personal opinion ("ask the instructor for his or her opinion of the topic" and "give the instructor my personal opinion on a topic"), questions of general interest ("raise questions unrelated to course content and try to enliven discussion by asking 'off the wall' or unusual questions"), and questions of information ("ask questions that showed how well-informed I am about a topic" and "ask the instructor to relate a personal example to help clarify or illustrate course material").

The question preference set was specifically worded to determine if male and female students differed in their assertiveness (e.g., challenge the instructor or give an opinion) and their method of obtaining information from the instructor (e.g., ask for a personal opinion or raise unusual questions). All eight questions also reflect several of the situational/predispositional factors, especially conspicuousness and subordinate status in that raising these types of questions places students at the center of attention.

Validity Checks. Two additional measures were defined as validity checks for the CAPS and QMS. That is, one would

expect high CCA's and students with a low motivation to ask questions should report a lower frequency of question-asking across the courses in which they are enrolled. The frequency measure consisted of six initial categories that then were collapsed into three categories to ensure adequate cell sizes for analysis. The categories were: (1) a few times each class to once a week, (2) twice a month to a few times a semester, and (3) seldom or never.

The second validity check examined the method of preferred interaction with an instructor. The response categories included direct question-asking in class and indirect methods of question-asking (i.e., before or after the start of class, in the instructor's office). One would expect high CCA's to prefer the indirect methods in order to avoid arousing their state anxiety. Low motivated question-askers also may select the indirect methods if they are either disinterested or need additional clarification at some time after a class discussion.

Data Analysis. The question preference set and validity checks were assessed with chi-square. All other measures were examined with correlation.

Results

RQ1. Does student or instructor gender affect classroom questioning? Gender generally failed to yield significance with the dependent measures examined in this study. Gender failed to influence CCA level or questioning motivation. The four instructional intervention sets and student gender also failed to interact with instructor gender to influence question-asking intentions.

The only consistent evidence of a gender effect in this study was observed with the type of questions that students reported they would ask of their male and female instructors. Male students reported they would be more likely to challenge their instructors--regardless of instructor gender--to defend something that the instructor said (chi-square = 9.62, 3df, tau = .10, $p < .02$; Males = 71%, Females = 47%). Male students

also reported that they asked "off the wall" or unusual questions to help enliven discussion (chi-square = 22.99, 3df, tau = .21, $p < .001$; Males = 47%, Females = 20%). Collectively, these findings reveal a relative rather than an absolute difference between female and males students. That is, although males reported a stronger preference for these "assertive" behaviors, only 27 percent of males selected these questions more often than did female students.

RQ2. What is the relationship between classroom communication apprehension and question motivation and student behavioral intentions to ask questions? CCA and the QMS yielded significance with the situational factor set and one questioning behavior set (i.e., the instructor mid-lecture question prompt). Despite the multicolinearity ($r = .42$, $p < .001$) between the CAPS and QMS, only the QMS predicted the mid-lecture prompt. However, the CAPS also yielded significant correlations with the mid-lecture prompt. Given the relatively small differences in correlation between the CAPS and QMS with most of the scale items, Table 1 reports simple correlations rather than the full regression results.

Table 1 about here

As findings in Table 1 demonstrate, the CAPS and QMS only moderately correlated with the mid-semester prompt items. Furthermore, only two items (i.e., "if the instructor seemed eager" and "if asking questions would help my grade") yielded at least a .25 difference in correlation between the CAPS and QMS.

RQ3. What is the relationship between contextual factors and classroom communication apprehension and question motivation? Examination of correlations with the situational factor set revealed that the CAPS yielded larger correlations than the QMS. Findings demonstrate that the QMS, despite its modest intercorrelation with the CAPS, failed to consistently correlate as highly with the situational factors that extant

research indicates are highly associated with apprehension. For instance, the CAPS significantly correlated with conspicuousness ($r = .60$, $p < .001$), evaluation potential ($r = .57$, $p < .001$), novelty ($r = .53$, $p < .001$), and acquaintance level ($r = .52$, $p < .001$). The QMS also yielded significant correlations ($p < .01$) but produced much smaller coefficients of .35, .20, .23, and .29 with the same four situational factors, respectively. The generally smaller coefficients for the QMS suggest that the scale also measures a general motivational disposition toward question-asking independent of CCA.

RQ4. Does a student's classroom communication and question motivation affect frequency of question-asking? The QMS and the CAPS also were compared with student self-reports of question-asking and their method of preferred interaction with instructors. These findings are reported in Tables 2 and 3. These findings reveal that question-asking, as measured by the QMS, represents a general motivational disposition unrelated to CCA for avoiding asking questions. For instance, five times as many "low" QMS respondents ask questions than high CCA students (i.e., 62 versus 12 percent) despite that fact that both groups of respondents generally ask few question in class (i.e., 22 versus 13 percent).

Table 2 about here

Table 3 about here

RQ5. Will some instructor behavioral interventions prove more successful based on a student's apprehension level or motivation level? A final comparison between the CAPS and QMS examined the correlation of each scale with the four instructional intervention sets. The CAPS ($r = .22$, $p < .05$) and QMS ($r = .32$, $p < .04$) each yielded a significant--although

only moderate--relationship with the instructor interaction style and the instructor responding style. The QMS also correlated significantly with an instructor's ability to lead class discussion ($r = .31$, $p < .04$) while the CAPS did not ($r = .09$).

A final set of analyses examined the influence of the situational factors and the instructional intervention sets on behavioral intentions. Only one situational factor (i.e., conspicuousness) and two intervention sets (i.e., ability and style) generally gave consistent correlation coefficients with each behavioral intention set. These findings will not be reported because they were consistently lower (i.e., .05 to .12) than the correlations between the QMS and CAPS with behavioral intention items.

Discussion

Pearson and West (1991) supported earlier research indicating that university undergraduates ask few questions in class. The purpose of their study was not to determine why students do or do not ask questions; but whether a gender-based dynamic between teacher and student explained classroom questioning behavior. Aitken and Neer (1991) moved toward identification of variables associated with question-asking in the classroom. They found the gender dynamic provided little explanation in their study, but differences in the two studies may be explained by the differences in methods, types or location of the colleges used in the study, or other factors. The failure of our study to uncover a consistent gender dynamic may not be at odds with the Pearson and West study. In the first place, Pearson and West failed to find gender differences with overall question-asking, but found that male students asked more questions than females students in classes taught by male instructors. Nor do we believe our findings regarding overall question-asking contradict those of Pearson and West. They reported an average of 3.3 questions asked per hour of instruction. We asked respondents to estimate their total

frequency across all courses in a typical semester rather than the number of questions asked in a typical class hour.

An important implication of the findings in this study rests with the research priority scholars place on testing apprehension as a factor inhibiting question-asking and the subsequent assumption that educators must therefore establish a supportive classroom environment before high CCA's will talk in class. The social climate in the classroom is important to all students and not only to high CCA's. High CCA's, however, failed to respond as positively to the instructor behavioral interventions in this study as the highly motivated question-askers. Thus, a comparison of the CAPS and QMS provides important information for building a profile of the type of student who is likely to ask classroom questions. In addition to previous factors contributing to that profile, including achievement level, communication ability, and class preparedness, the present study suggests that motivation level is a better indicator of question-asking than classroom apprehension level. The implication is that the majority of students who do not ask questions are not apprehensive; they are unmotivated to ask questions. We are not suggesting that apprehension should be ignored; our recommendation is that researchers and educators not rely on apprehension as a single causative factor and, therefore, the sole agent of change for increasing classroom questioning. Perhaps instructor encouragement is essential to motivate students to ask questions.

Studies in question-asking are extremely important to educators because they document an issue of concern to many instructors: why do students ask so few questions? This question raises several issues. First, it assumes that students should be asking more questions than they currently do. In fact, question-asking may be unnecessary if an instructor clearly presents lecture material, or if the lecture itself is of a factual nature, or if no interpretation of lecture or text material is required of students. Although in

some learning situations--and for some professors--a small number of questions per class period may be preferred, more frequent questioning would suggest an increased interaction and involvement in the learning process. One can assume that increased questioning frequency should not be from a few students who dominate a classroom, but from a cross-section of students. Active involvement has been well-documented as an influential factor in the learning process (Chickering, Gamson, Varsi, 1989). Question-asking is a significant part of classroom involvement; it may not only increase learning but also increase student interest and allow students to take ownership of a course while accepting responsibility for their own learning. Thus, if one assumes that question-asking is an integral part of active learning, the questioning process may engage students most effectively when focused on questions of value and interpretation instead of technical or factual information. Technical and factual information may provoke questions of clarification and information-seeking; however, value-based questions may stimulate greater involvement because they require higher order levels of thinking. Failure to distinguish types of questions asked may result in deflated frequency rates, especially for students who are not apprehensive but who are simply not motivated to ask questions over material they find easy to grasp or uninteresting.

If a positive social climate in the classroom--as most situational factors represent--fails to increase question-asking, what will do so? We are currently experimenting with using the task dimension to increase question-asking. In two courses, students were given a major assignment--accounting for 20% of the course grade--due within two weeks of the beginning of the course. These assignments provoked an enormous number of questions from nearly half the students enrolled in each class. In one course, the assignment was given the first day and generated more than a half hour of student questions and instructor responses. While much of the questioning has focused on clarification, more students than usual have asked

questions as early as the first class session and for as long as thirty minutes at a time. From this experiment, we have surmised that clarification questions are less difficult to initiate than questions of interpretation because students are motivated to ask clarification questions in an attempt to reduce task uncertainty regarding a difficult assignment for which they have limited experience.

Question-asking that is focused on the task dimension may generate less anxiety than that produced by interpretive-based question-asking focused on value-oriented discussion. Perhaps a student's motivation to succeed at a task and grade supersedes his or her social apprehension. In the beginning stage of the class--perhaps because students consider everyone equally unfamiliar with the instructor, the course structure, and course assignments--students may consider questions as useful and acceptable. If students perceive early task questions as helpful to everyone, they may be more willing to ask them. Finally, students may be motivated to find out all the specific information they can during the first week, so that if they consider the course assignments too difficult, they can transfer to another course. When students discover their barrage of questions to be welcomed by the class and the instructor, a norm of student question-asking can be established for the class. Such a task-oriented classroom management technique has the added potential benefit of enhancing student learning (Bruschke & Gartner, 1991).

Our classroom experiment is only anecdotal in nature, but it has led us to reconsider the most appropriate means for prompting questions from students. We have assumed that early classroom discussion should focus on "get-acquainted" activities, in which students self-disclose in a way they normally do in other interpersonal situations. But the work or task-dimension of the classroom may mean that a more business-like approach should be taken. Rushing too early in a semester into the social-dimension may elevate evaluation potential and conspicuousness if the focus is on self-disclosure and value-

centered discussion. On the other hand, discussion that is task-centered may reduce both evaluation potential and conspicuousness if students perceive question-asking as affecting their grade performance in the course. That is, grade anxiety may override social anxiety, while creating a justifiable context for asking questions that are centered on a common need for all students to know, rather than on a desire for individual students to state what they think or feel. The interaction is important but impersonal, thus less risky.

We hope that future research will test our anecdote. Classroom questioning that is motivated by a need to know may pave the way for enlarged discussion on topics of interpretation once high CCA's and low motivated question-askers have initially asked non-personally threatening questions of clarification. Perhaps as educators, we are too reluctant to ask students for questions for fear of making them more apprehensive. As well-intended as these actions may be, educators may unwittingly victimize students with such an assumption. Perhaps allowing students to remain quiet is the greater problem. Motivating students to question--through a non-personal, non-threatening, task-orientation--may prompt increased involvement throughout the course.

Booth-Butterfield (1988) showed that high CA's can be motivated to perform when an assignment contributes a high percentage to their final course grades. Neer and Hudson (1982) also demonstrated a similar reward value when they required prospective teachers to lead a class discussion with the entire class rather than with a small group of students. Their findings did show that high CA's who led a discussion before the entire class were more anxious than high CA's who led discussion within small groups. They also revealed, however, that the former group of high CA's reported higher satisfaction with their performance than the latter group. These two studies suggest that high apprehensives and low motivated question-askers will rise to the personal challenge and take responsibility for themselves. There will always be

some students who need an extra cushion of comfort before performing to their potential, but educators in communication should continue to create conditions that encourage students to speak and question for themselves.

References

Aitken, J. E., & Neer, M. R. (1991, October 31). Variables associated with question-asking in the college classroom. Paper presented at the annual meeting of the Speech Communication Association, Atlanta, GA. (ERIC Document Reproduction Service No. ED 184 182)

Andersen, J. E., Norton, R. W., & Nussbaum, J. F. (1981). Three investigations exploring the relationships between perceived teacher communication behaviors and student learning. Communication Education, 30, 377-392.

Ayers, J. (1990). Situational factors and audience anxiety. Communication Education, 39, 283-291.

Beatty, M. H. (1988). Situational and predispositional correlates of public speaking anxiety. Communication Education, 37, 28-39.

Beatty, M. J., Balfantz, G. L., & Kuwabara, A. Y. (1989). Trait-like qualities of selected variables assumed to be transient causes of performance state anxiety. Communication Education, 38, 277-289.

Booth-Butterfield, S. (1988). Instructional interventions for reducing situational anxiety and avoidance. Communication Education, 37, 214-223.

Bruschke, J. C., & Gartner, C. N. (1991). Teaching as communication: Advice for the higher education classroom. Applied Communication Research, 19(3), 197-216.

Buss, A. H. (1980). Self-consciousness and social anxiety. San Francisco: W. H. Freeman and Company.

Carner, R. L. (1963). Levels of questioning. Education, 83, 546-550.

Chickering, A. W., Gamson, Z. F., Varsi, L. M. (1989). Inventories of good practice in undergraduate education. Milwaukee, WI: The Johnson Foundation.

Darling, A. L. (1989, January). Signally non-comprehensions in the classroom: Toward a descriptive typology. Communication Education, 38(1), 22-32.

Dillon, J. T. (1981, November). A norm against student questions. The Clearing House, 55, 136-139.

Foss, S. K. (1989). Rhetorical criticism as the asking of questions. Communication Education, 38, 191-196.

Gliessman, D. (1985). Questioning in classrooms. (ERIC Document Reproduction Service No.ED 303 840).

Good, T. L.; Slavings, R. L.; Harel, K. H.; Emerson, H. (1987). Student passivity: A study of question-asking in K-12 classrooms. Sociology of Education, 160, 181-199.

Karp, D. A., & Yoels, W. C. (1976). The college classroom: Some observations on the meanings of student participation. Sociology and Social Research, 60(4), 421-439.

McCroskey, (1984). The communication apprehension perspective. In J. Daly & J McCroskey (Eds.), Avoiding communication, (pp. 13-38). Beverly Hills: Sage.

Neer, M. R. (1990). Reducing situational anxiety and avoidance behavior associated with classroom apprehension. Southern Communication Journal, 56, 49-61.

Neer, M. R. (1987). The development of an instrument to measure classroom communication apprehension. Communication Education, 36, 153-166.

Neer, M. R., & Hudson, D. D. (1982, November). A method of teaching apprehensive students to lead classroom discussion. Paper delivered at the meeting of the Speech Communication Association, Anaheim, CA.

Pearson, J.C., & West, R. (1991, January). An initial investigation of the effects of gender on student questions in the classroom: Developing a descriptive base. Communication Education, 40(1), 22-32.

Potter, W. J., and Emanuel, R. (1990). Students' preferences for communication styles and their relationship to achievement. Communication Education, 39, 234-249.

Rubin, R. B. & Feezel, (1986). Elements of teacher communication competence. Communication Education, 35, 254-268.

Spitzberg, B. H., & Hurt, H. T. (1987). The measurement of interpersonal skills in instructional contexts. Communication Education, 36, 28-45.

Staton-Spicer, A. Q. & Wulff, D. H. (1984). Research in communication and instruction; Categorization and synthesis. Communication Education, 33, 377-376.

Zorn, T. E. (1991). Measuring motivation-to-communicate in the classroom. Communication Education, 40, 385-392.

Table 1

Effects of Classroom Communication Apprehension and Question Motivation on Behavioral Intentions

	CAPS	QMS
Become nervous	.28	.29
Instructor really wants questions	..11	.16
Couldn't understand a point	.23	.33
Stimulating answer	.38	.41
Enough time to think of questions	.29	.33
Moved away from lectern	.18	.27
Ask if it helped my grade	.10	.35
Instructor seemed eager	.19	.50
Instructor asked follow-up questions	.20	.33

Note: correlations above .28 ($p<.05$) and above .36 ($p<.01$) with two-tailed test.

Table 2

Frequency of Question-Asking

	Once a week	Once a month	Seldom/Never
Apprehension (CAPS)			
Low	86	14	0
Medium	45	37	18
High	13	43	44
(Chi-squared=35.57, 4df, tau=.43, p<.001)			
Motivation (QMS)			
Low	22	28	50
Medium	50	37	13
High	64	32	4
(Chi-squared 33.90, 4df, tau=.35, p<.001)			

Table 3

Preferred Method of Interaction with Instructors

	In Class	Out of Class
Apprehension (CAPS)		
Low	63	37
Medium	25	75
High	12	88
(Chi-square=18.22, 2df, tau=.33, p<.001)		
Motivation (QMS)		
Low	62	38
Medium	68	32
High	80	20
(Chi-squared=2.61, 2df, tau=.12, p<25[ns])		

Appendix A

Question Motivation Scale (QMS)

1. I ask more questions in class if other students are also asking questions and are interested in the discussion.
2. I ask more questions in class if I like the subject being discussed.
3. I am more likely to ask questions in class when I am prepared for class (i.e., have read the assigned reading, etc.).
4. I ask more questions in class when I am not physically tired, and I am feeling full of energy.
5. I ask more questions in class if I like the course.
6. I ask more questions in class if I am already in a good mood before going to class.
7. I ask more questions in class when I am feeling well--either physically or mentally alert.
8. I enjoy asking questions in class.
9. I am generally satisfied with the amount of questions that I ask in class.
10. I wish that my instructors would ask students for more questions than they now do in class.
11. I would like to see more discussions be held in some (or many) of the courses that I am taking.
12. I enjoy listening to the questions that other students ask in class.